

REMARKS

Claims 1-10, 12-14, and 16 are currently pending. Claims 1, 2, 4, 5, 7, 9, 10, and 12 are amended. Claims 11 and 15 are cancelled.

Re-submitting IDS to Comply with 37 C.F.R. §1.98(a)(2)

The IDS that was previously filed on May 9, 2005 was objected to as failing to comply with 37 C.F.R. §1.98(a)(2). Applicants respectfully traverses this objection.

In a separate letter, Applicant is re-submitting the IDS that was previously filed on May 9, 2005 with legible copies of each cited foreign patent document.

Claims 1, 5, 8, 9, and 16 are Patentable over Sun under §102

Claims 1, 5, 8, 9, and 16 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,469,303 to Sun et al. (Sun). Applicants respectfully traverse this rejection.

Claim 1 recites "A gas sensor comprising a chamber arranged to admit gas, a radiation source, a plurality of detectors sensitive to radiation from the radiation source, and a plurality of respective reflective curved surfaces, the detectors being arranged around the radiation source and each detector being arranged to receive radiation from the radiation source reflected by the respective curved surfaces of curvature such that radiation from the radiation source is focussed onto each detector, the radiation source and plurality of detectors being arranged within the chamber."

Sun fails to disclose the claimed detectors arranged around the source. See, for example, in Figure 2 of Applicant's Specification, detectors 15-18 are arranged around the source 13 and, in Figure 4, detectors 29-34 are arranged around the source 26. By contrast, Sun discloses two detector assemblies 128 in Figure 5 that are not arranged around the Infrared source 126. (Sun, col. 7, lines 30-47.)

The claimed arrangement of detectors around a source provides a compact design, because a source may be used to provide radiation to a number of detectors. In addition, by arranging the detectors around the source, such that radiation is focused by respective curved surfaces, it is possible to provide a path length comparable to a detector within a smaller volume. The compact design for multiple gas detectors in one housing is a direct result of multiple detectors each being located around the source.

Therefore, claim 1 is patentable over Sun under §102. Claims 5, 8, 9 and 16 are dependent from claim 1 and are allowable as being dependent from an allowable claim.

Claims 1-7, 9, 11, and 14-16 are Patentable over Martin under §102

Claims 1-7, 9, 11, and 14-16 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 6,194,735 to Martin (Martin). Applicants respectfully traverse this rejection.

Claim 1 recites "A gas sensor comprising a chamber arranged to admit gas, a radiation source, a plurality of detectors sensitive to radiation from the radiation source, and a plurality of respective reflective curved surfaces, the detectors being arranged around the radiation source and each detector being arranged to receive radiation from the radiation source reflected by the respective curved surfaces of curvature such that radiation from the radiation source is focussed onto each detector, the radiation source and plurality of detectors being arranged within the chamber."

Martin fails to disclose the claimed the radiation source and plurality of detectors being arranged within the chamber. By contrast, Martin discloses a light source 2a, electronics 10 and an analyzing arrangement 11 located outside of the cavity 2 of the gas sensor A. (Martin, Figure 1 and col. 7, line 27 to col. 8, line 5.)

Therefore, claim 1 is patentable over Martin under §102. Claims 2-7, 9, 11, and 14-16 are dependent from claim 1 and are allowable as being dependent from an allowable claim.

Claims 10-13 are Patentable over Sun/Parry under §103

Claims 10-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sun in view of U.S. Patent No. 5,973,326 to Parry et al. (Parry). Applicants respectfully traverse this rejection.

Claim 1 recites "A gas sensor comprising a chamber arranged to admit gas, a radiation source, a plurality of detectors sensitive to radiation from the radiation source, and a plurality of respective reflective curved surfaces, the detectors being arranged around the radiation source and each detector being arranged to receive radiation from the radiation source reflected by the respective curved surfaces of curvature such that radiation from the radiation source is focussed onto each detector, the radiation source and plurality of detectors being arranged within the chamber."

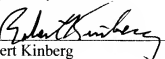
As discussed above, Sun fails to disclose the claimed detectors arranged around the source. Like Sun, Parry also fails to disclose the claimed detectors arranged around the source. In contrast to the claimed invention, Figure 2 of Parry discloses a source 6 and an adjacent reference source 11 that are not arranged around the source 5. (Parry, Figures 1 and 2, col. 3 lines 16-63.)

Therefore, claim 1 is patentable over the combination of Sun and Parry under §103. Claims 10-13 are dependent from claim 1 and are allowable as being dependent from an allowable claim.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Dated:

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